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Ruth Montalvo

12 June 02
Date

Docket No.: GK-ZEI-3156-500343.2015

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ralf WOLLESCHEFSKY and Michael KEMPE
Serial No.: 10/081,096
Filed: February 21, 2002
For: ARRANGEMENT FOR THE OPTICAL CAPTURE OF EXCITED
AND/OR BACKSCATTERED LIGHT BEAM IN A SAMPLE

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to receipt of a first Office Action, please amend the above-identified application as follows:

IN THE SPECIFICATION

Cancel the present specification and substitute therefor the enclosed substitute specification.

IN THE CLAIMS

Page 19, line 1, change "Patent Claims" to --What is claimed is--.

Cancel claims 1-21 and add new claims 22-42, reading as follows:

--22. (New) An arrangement for the optical detection of light radiation which is excited and/or backscattered in a specimen, comprising:
means for focusing specimen illumination in and/or in the vicinity of a pupil plane of a beam path between a specimen plane and a detection plane; and
apparatus being provided in said pupil plane for spatially separating the illumination light from the detection light.

23. (New) The arrangement according to claim 22, wherein fluorescent light and/or luminescent light and/or phosphorescent light and/or diffusely scattered illumination light coming from the specimen is detected.

24. (New) The arrangement according to claim 22, wherein the apparatus for spatial separation comprises at least a reflecting first portion and at least a transmitting second portion, wherein the reflecting portion serves to couple in the illumination light and the transmitting portion serves to pass the detection light in the detection direction, or the transmitting portion serves to couple in the illumination light and the reflecting portion serves to couple out the detection light.

25. (New) The arrangement according to claim 22, wherein a beam splitter is provided which has a central portion which is constructed so as to be reflecting or transmitting and which is surrounded by a second portion which is constructed so as to be transmitting or reflecting.

26. (New) The arrangement according to claim 25, wherein the beam splitter is constructed as a pole splitter.

27. (New) The arrangement according to claim 25, wherein scanning is carried out with the beam splitter.

28. (New) The arrangement according to claim 22, with oblique illumination for a wide field microscope.

29. (New) The arrangement according to claim 28, wherein a lens which is displaceable vertical to the optical axis is provided.

30. (New) The arrangement according to claim 22, wherein a wide field microscope with structured illumination is provided.

31. (New) The arrangement according to claim 30, wherein a depth-resolved detection of the specimen is carried out.

32. (New) The arrangement according to claim 22, in a laser scanning microscope.

33. (New) The arrangement according to claim 22, wherein a line scanner is provided.

34. (New) The arrangement according to claim 33, wherein the scanning line is overlaid with structured illumination.

35. (New) The arrangement according to claim 33, wherein the length of the line is varied by varying the focal length and/or imaging scale of a microscope arrangement.

36. (New) The arrangement according to claim 33, wherein the length of the line is varied by means of adaptive optics.

37. (New) The arrangement according to claim 33, wherein the length of the line is varied by an adjustable diaphragm.

38. (New) The arrangement according to claim 22, with descanned detection.

39. (New) The arrangement according to claim 22, with partially descanned detection in one direction.

40. (New) The arrangement according to claim 22, with nondescanned detection.

41. (New) The arrangement according to claim 22, wherein the detection is carried out by a CCD camera.

42. (New) The arrangement according to claim 22, wherein a sampling and/or detection of selected specimen areas is carried out.--

IN THE ABSTRACT OF THE DISCLOSURE

Cancel the present Abstract of the Disclosure and substitute therefor the enclosed Abstract of the Disclosure which is attached to the Substitute Specification.

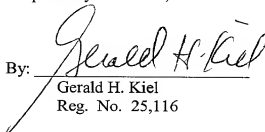
REMARKS

Claims 1-21 have been cancelled and new claims 22-42 have been added. The amendments to the claims have been made only to improve the form of the claims for examination purposes.

The specification and abstract have been amended to conform it to U.S. format.

An early and favorable action on the merits is respectfully requested.

Respectfully submitted,

By: 
Gerald H. Kiel
Reg. No. 25,116

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GHK:jl
Enc.: Substitute Specification
Substitute Abstract of the Disclosure